

Vejledende Løsning til Eksamen i DSDS, forår 2007

Scripting, Databaser og Systemarkitektur

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Vejledende Løsning til Opgave 1 (15 procent) - HTML

Opgave 1.1 (7 procent)

```
<form action="votes.php">
  <input type="hidden" name="pid" value="3">
  <input type="hidden" name="passwd" value="9347">
  <input type="text" size="50" name="head">
  <input type="submit" value="Create Question">
</form>
```

Opgave 1.2 (8 procent)

```
<table width="100%" align="center">
  <tr><td><b>Inbox Questions</b></td>
    <b>From</b><td><b>Action</b></tr>
  <tr><td>Have you heard about the course Distributed Systems?
    <td><a href="mailto:panic@itu.dk">Arne Glenstrup</a>
    <td><a href="status.php?pid=3&passwd=9347&qid=3">status</a>
  </tr>
  <tr><td>Did you get any X-Mas presents this year?
    <td><a href="mailto:nh@itu.dk">Niels Hallenberg</a>
    <td><a href="status.php?pid=3&passwd=9347&qid=2">status</a>
    | <a href="answer.php?pid=3&passwd=9347&qid=2&ans=y">YES</a>
    | <a href="answer.php?pid=3&passwd=9347&qid=2&ans=n">NO</a>
  </tr>
</table>
```

Vejledende Løsning til Opgave 2 (15 procent) - PHP

Opgave 2.1 (7 procent)

```
function gen_passwd () {
  $p = "";
  $i = 0;
  while ( $i < 4 ) {
    $p .= rand(2,9);
    $i++;
  }
  return $p;
}
```

Opgave 2.2 (8 procent)

```
function mydb_one_field ($sql) {
  $rows = mysql_query($sql);
  if ( $rows ) {
    $row = mysql_fetch_row($rows);
    if ( $row )
      return $row[0];
    else
      error("No field in first row of the result set
of the query <br><pre>$sql</pre>");
  } else
    error("No row in the result set
of the query <br><pre>$sql</pre>");
}
```

Vejledende Løsning til Opgave 3 (10 procent) - Regulære udtryk

Opgave 3.1 (5 procent)

[0-9][0-9][0-9][0-9] eller [2-9][2-9][2-9][2-9]

Opgave 3.2 (5 procent)

```
function va_chk_passwd ( $pw ) {
    if ( ! ereg('^[0-9][0-9][0-9][0-9]$', $pw) ) {
        error ("<h2>Form variable violation</h2>
            I expected a password, but received something
            else - use the back button in your browser to go back
            and correct your input.");
    }
}
```

Vejledende Løsning til Opgave 4 (25 procent) - SQL

Opgave 4.1 (5 procent)

```
+-----+-----+
| name          | email          |
+-----+-----+
| Arne Glenstrup | panic@itu.dk  |
| Martin Elsman   | mael@itu.dk   |
| Niels Hallenberg| nh@itu.dk     |
+-----+-----+
```

Opgave 4.2 (5 procent)

```
create table va_answer (
    pid integer not null, -- references va_person
    qid integer not null, -- references va_question
    ans char(1),          -- 'y' or 'n' or NULL if no answer yet
    unique (pid,qid)
);
```

Opgave 4.3 (5 procent)

```
insert into va_answer (pid,qid) values (2,1);
insert into va_answer (pid,qid) values (1,1);

insert into va_answer (pid,qid) values (3,2);
insert into va_answer (pid,qid) values (1,2);
```

Opgave 4.4 (5 procent)

```
select q.qid, head, ans, name, email
from va_question q, va_answer a, va_person p
where a.qid = q.qid
and a.pid = 3
and p.pid = q.pid;
```

Opgave 4.5 (5 procent)

```
select count(*)
from va_answer
where ans = 'n' and qid = 1;

select count(*)
from va_answer
where qid = 1
```

Vejledende Løsning til Opgave 5 (35 procent) - Web-service

Opgave 5.1 (8 procent)

```
$query = "select name from va_person
        where pid = $pid
        and passwd = '$passwd'";
```

Opgave 5.2 (9 procent)

```
function va_footer () {
    echo ("<hr><a href=mailto:webmaster@voteaboutit.com>webmaster@voteaboutit.com</a>");
}
```

```
    </body></html>");  
}
```

Opgave 5.3 (9 procent)

##A##

```
select p.pid, email, passwd  
  from va_person, va_answer  
 where va_person.pid = va_answer.pid  
       and va_answer.qid = $qid
```

##B##

```
$pid2 = $row[0];  
$email = $row[1];  
$passwd2 = $row[2];  
$body = email_body($pid2, $passwd2);  
echo "<li>Sending email to $email</li>";  
mail($email, "VoteAboutIt question", $body);
```

Opgave 5.4 (9 procent)

```
<?  
include("va_lib.php");  
$pid = $REQUEST['pid'];  
$passwd = $REQUEST['passwd'];  
$qid = $REQUEST['qid'];  
va_chk_int($qid);  
va_header($pid, $passwd, "Status");  
  
$authorized = mydb_one_field("select count(*)  
                             from va_question  
                             where qid = $qid and pid = $pid");  
if ($authorized < 1) error ("You cannot access other users' questions");  
  
$head = mydb_one_field("select head  
                       from va_question  
                       where qid = $qid");  
  
echo "<h3>Status for the question '$head'</h3>";  
  
$total = mydb_one_field("select count(*)  
                        from va_answer  
                        where qid = $qid");  
  
$no = mydb_one_field("select count(*)  
                     from va_answer  
                     where ans = 'n'  
                     and qid = $qid");  
  
$yes = mydb_one_field("select count(*)  
                      from va_answer  
                      where ans = 'y'  
                      and qid = $qid");  
  
echo "<ul><li>Yes: $yes/$total  
     <li>No: $no/$total  
     </ul>";  
va_footer();  
?>
```

mael@itu.dk, panic@itu.dk